REMARKS/ARGUMENTS

Request for Continued Examination:

The applicant respectfully requests continued examination of the above-indicated application as per 37 CFR 1.114.

1. Rejection of claims 1, 2 and 4-8 under 35 U.S.C. 102(e) as being anticipated by Kim (US 20040142525):

Response:

Claim 1:

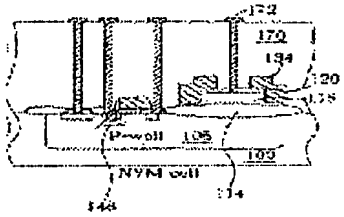
Claim 1 has been amended to overcome this rejection. Specifically, the limitations "the first isolation structure being a field oxide layer", " the control gate is surrounded by the floating gate" and "the opening is closed" have been added in claim 1. These limitations find support in [0031], Fig. 5, and Fig. 6 in the specification for instance, and no new matter is introduced.

Regarding US 2004/0142525, the memory cell of Kim is different from claim 1 for the following reasons. First, the first isolation structure of claim 1 disposed under the control gate is a field oxide layer. The field oxide layer is thick (the thickness of the field oxide layer is substantially between 4000 and 6000 angstroms as recited in [0035] in the specification), and able to prevent tunneling. On the other hand, the oxide layer 25a in Kim's teaching is not a field oxide layer. Kim fails to teach the oxide layer 25a is a field oxide layer. In addition, the control gate of claim 1 is surrounded by the floating gate, and the floating gate comprises an opening having a closed shape. In Kim's teaching, however, the control gate 27a is not surrounded by the floating gate 35a, and the closed opening is not shown. Furthermore, the second isolation structure of claim 1 surrounds the second region (as shown in Fig. 5). In Kim's teaching, the trench 23 does not surround the second region.

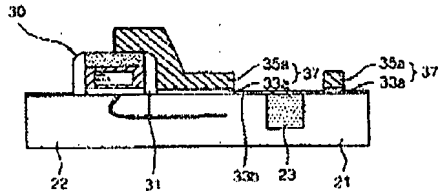
Still another distinguishable point, with reference to the following drawings, the 27a structure in Kim's patent is the floating gate but not the control gate as numbered

as 118 in the present application. According to the top view provided in the present application, the floating gate 134 extending outward to the gate structure within N-doped region 58 so that the floating gate 134 is injected with hot electrons from drain region (described in the description regarding Fig. 21 in specification). However, in Kim's patent, the floating gate 27a is written via a "channel" performed when the voltage is applied to the S/D (not shown in Kim's cross-sectional view). In other words, Kim's does not teach that the floating gate surrounds the control gate and extends to the outside gate structure. Those features cause distinguishable operational differences.

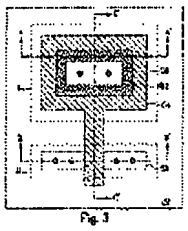
Cross-sectional view in the present application



Cross-sectional view in Kim's patent



Cross-sectional top view in the present application



In conclusion, claim 1 is patentably distinct from Kim's teaching, and should be

allowed. Reconsideration of claim 1 is politely requested.

Claims 2 and 4-8:

Claim 6 has been amended, and this amendment finds support in [0035] in the specification, for instance. No new matter is introduced.

Claims 2 and 4-8 are dependent on claim 1, and should be allowed if claim 1 is found allowable. Reconsideration of claims 2 and 4-8 is politely requested.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Sincerely yours,

/ Winston Hsu /

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Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 13 hours behind the Taiwan time, i.e. 9 AM in D.C. = 10 PM in Taiwan.)